

History of the Missouri Section of the Mathematical Association of America
Leon M. Hall
University of Missouri - Rolla

At the first Summer Meeting of the Association, September 1-2, 1916, one of the papers was on a historical topic by Professor David Eugene Smith, Columbia University. In the report on this meeting in the October 1916 *Monthly* is the statement, "The paper by Professor Smith aroused keen enthusiasm and brought out many expressions of appreciation both at the time and later at the dinner in the evening. Historical topics in connection with mathematics have already won a favorable place in the estimation of members of the Association as desirable program material." Beginning with the 2006 Missouri Section meeting, I hope "keen enthusiasm" for the history of our section can be stirred up, and this presentation will attempt to provide some motivation in that direction.

The role of the *American Mathematical Monthly*.

When Benjamin Franklin Finkel came to Kidder, Missouri, in 1892 to teach mathematics at the Kidder Academy, he brought with him an idea, maybe at first only a dream. Finkel saw a need for a journal to meet or, more likely, help develop, the interests of mathematics teachers in high schools and academies, especially those in rural areas. With the help of the editor and publisher of the local newspaper and his friend John M. Colaw, whom Finkel knew through his contributions to the *School Visitor*, in January 1894 the dream was realized and the first issue of *The American Mathematical Monthly* was published. The first person to subscribe to the *Monthly* was J.M. Greenwood, Superintendent of Schools in Kansas City, who was a mathematician-turned-administrator and who promised to bring the journal to the attention of his mathematics teachers. One of those teachers was George R. Dean, later Professor of Mathematics at the Missouri School of Mines in Rolla. Dean became a regular contributor to the *Monthly*, mostly through proposing and solving problems, but also with occasional short articles, but he never joined MAA. Greenwood had taught in rural schools in northeast Missouri in the 1850s and 1860s, and was among the first faculty members at the Kirksville Normal School, where he taught mathematics, logic, and natural philosophy from 1867 until 1874, when he accepted the position of Superintendent of the Kansas City Public Schools.

In June, 1895 Finkel accepted the position of Professor of Mathematics and Physics at Drury College in Springfield, MO, and when he moved to Springfield, the *Monthly* moved with him. That same summer, Finkel attended summer school at the University of Chicago, where he met Leonard Eugene Dickson. In 1900 Dickson became co-editor of the *Monthly*, replacing Colaw, who had turned to other interests. Along with Dickson's editorial help the *Monthly* received a subsidy of \$50 per year from the University of Chicago. In 1906 Dickson was succeeded as co-editor by H.E. Slaughter, also from the University of Chicago. By this time the *Monthly* was becoming more than two editors could comfortably handle. Finkel was worried about the publisher/printer quitting, and there were financial worries. Also, the main audience of the *Monthly* was not the high school teachers that Finkel first aimed for, but college teachers of mathematics. In 1912, Finkel and Slaughter discussed how to keep the *Monthly* viable, and the result was that, beginning with Volume XX in 1913, the *Monthly* was published with the cooperation of twelve universities (Chicago, Colorado, Illinois, Indiana, Iowa, Kansas,

Michigan, Minnesota, Missouri, Nebraska, Northwestern, and Washington U. of St. Louis) and two colleges (Colorado and Oberlin), a move that both widened the journal's support and solidified its financial position.

Finkel and Slaughter believed, however, that the best way to assure the future of the *Monthly* was to have it associated with a mathematics professional organization, and the natural group to approach was the American Mathematical Society. At the April 1914 meeting of the Chicago Section of the AMS, following informal discussion at dinner, a committee of the Section was appointed to consider "the relation of the Society to the field now covered by the *American Mathematical Monthly*." In December 1914, at the business meeting of the Chicago Section, this committee recommended and it was "voted that the Chicago Section request the Council of the Society to appoint a committee to consider and report concerning possible relations of the Society to the field now covered by the *American Mathematical Monthly*." A committee of five was appointed, and at the April, 1915 AMS meeting in New York, the following resolution was passed with only two or three dissenting votes:

"It is deemed unwise for the American Mathematical Society to enter into the activities of the special field now covered by the *American Mathematical Monthly*; but the Council desires to express its realization of the importance of the work in this field and its value to mathematical science, and to say that should an organization be formed to deal specifically with this work, the Society would entertain toward such an organization only feelings of hearty good will and encouragement."

More details can be found in issues of the *Monthly* or the *Bulletin of the AMS* from that time. So, if the *Monthly* was to be affiliated with a professional society, a new one would have to be created.

The birth of the Association

Slaughter went right to work. In June, 1915, he sent out hundreds of letters inquiring about the interest in forming such a new society, enclosing a reply post card. By November, the number of positive responses was approaching 450, with only a handful expressing any form of disapproval, and the organizational meeting for the new society was set for December 30-31, 1915, in Columbus, Ohio. The time and place was chosen to coincide with the already-planned joint meetings of the Chicago Section of the AMS and the American Association for the Advancement of Science. In his October 1915 *Monthly* article, Slaughter emphasizes that "this whole movement is ... [not] an effort on the part of those interested in the **MONTHLY** to rescue it from impending bankruptcy. The **MONTHLY** is in sound financial condition and is seeking no rescue measures." We can thus see that providing a professional organization home for the *Monthly* was an important component in the founding of the Mathematical Association of America, but this was certainly not the entire rationale. Another important reason was, as can be seen in the above quotes, that the *Monthly* had become both a symbol and an identifier for the field of collegiate mathematics and those whose main job was to teach collegiate mathematics, and the consensus was that this group was not adequately represented by either the high school organizations on one side or the AMS on the other.

In 1915 the American mathematical community was not large, and even if a new organization was to be formed to represent the great collegiate middle ground between the high school teachers and the researchers, overlap was inevitable on both ends, and leadership was probably going to come from people already professionally active in mathematics; this meant primarily the AMS. Thus began the practice of frequently scheduling MAA and AMS meetings simultaneously to allow people to attend both in one trip, something that is still done for the January Joint Meetings, and which continues to demonstrate the “hearty good will and encouragement” that the AMS had expressed towards the new organization.

Missouri was one of the states where a preliminary meeting was held in 1915 prior to the Columbus meeting. On November 27, 1915, the Southwestern Section of the AMS held its ninth regular meeting at Washington University, St. Louis. In the report on this meeting in the February, 1916 *Bulletin of the AMS*, twenty-eight members of the society were listed as attending, and of those, the following became active (i.e., attended one or more section meetings) in the Missouri Section of the MAA:

L. D. Ames – University of Missouri
Charles Ammerman – McKinley High School, St. Louis
E. R. Hedrick – University of Missouri
W. H. Roever – Washington University
C. A. Waldo – Washington University
Eula Weeks – Cleveland High School, St. Louis

Also attending this AMS meeting, and the December one in Columbus, was Dr. H. M. Sheffer of St. Louis, but there is no record of him ever attending a Missouri MAA Section meeting. Eula Weeks received her Ph.D. from the University of Missouri in 1915; her advisor was Hedrick, and she was his only Ph.D. student. The report in the *Bulletin* does not mention any kind of caucus of attendees from Missouri to discuss the formation of a new organization, but there must have been at least some informal discussions, because in the report (January 1917 *Monthly*) of the first Missouri Section meeting, held November 18, 1916, is the statement that, “Professor Hedrick gave a short report about the beginnings of this section in the unorganized meeting one year ago at Washington University.” There were fourteen papers presented at the 1915 Washington University AMS meeting, including two by Roever, who also presided at the meeting, and a joint paper by Hedrick and Louis Ingold (University of Missouri). Ingold became active in the Missouri MAA Section, but he was not listed as one of the AMS members attending the meeting, so either he was not an AMS member or he did not attend. These papers were in good company. Among the fourteen papers were one by G. H. Hardy and another by S. Lefschetz. However, neither Hardy nor Lefschetz were present at the meeting, and their papers were “read by title.” So, although we cannot claim that Hardy and Lefschetz were physically present at the inception of the Missouri Section, they were there in spirit through their work.

Hedrick made a special effort to attend the 1915 Washington University meeting. The previous day, November 26, 1915, he was in Chicago, where he gave the opening address at the fifteenth annual meeting of the Central Association of Science and Mathematics Teachers (see December 1915 *Monthly*). In 1915 there was probably good train service between Chicago and St. Louis,

but it must have still been at least a six to eight hour trip, depending on the number of stops. These were only the first two of four professional meetings Hedrick participated in at the end of 1915. He also attended the 22nd Annual Meeting of the AMS December 27-28 in New York, NY, where he was elected a Vice-President of the AMS (one of two), and the Columbus meeting December 30-31.

On December 30, 1915, in Room 101 of Page Hall, Ohio State University, Columbus, Ohio the first organizational meeting for a new mathematical association began. The meeting was extended to a second session the next day, when the constitution and by-laws were adopted and the name, The Mathematical Association of America, was agreed on. Attendees from Missouri were: B. F. Finkel, Drury College; E. R. Hedrick, University of Missouri; H. M. Sheffer, St. Louis; C. A. Waldo, Washington University; W. H. Zeigel, Kirksville Normal School. At the beginning of the meeting, Hedrick was elected temporary Chairman, and so presided at the meeting. Drafts of a constitution and by-laws had been prepared in advance, and the first session was devoted to getting agreement regarding them. Also, during the first session, when it was realized that the provisions of the by-laws regarding the nomination and election of officers could not be followed for the initial election, a special resolution was adopted to form a nominating committee, consisting of L. E. Dickson, University of Chicago; D. R. Curtiss, Northwestern University; H. L. Rietz, University of Illinois; S. E. Rasor, Ohio State University; and R. E. Root, United States Naval Academy. This committee reported at the second session Friday morning immediately after the final adoption of the Constitution and By-laws. Following the report of the nominating committee and the opportunity for further nominations from the floor, the following officers were elected:

President	E. R. Hedrick, University of Missouri
Vice Presidents	E. V. Huntington, Harvard University, and G. A. Miller, University of Illinois
Secretary-Treasurer	W. D. Cairns, Oberlin College (who served continuously until 1943)

Twelve members of the Executive Council were elected, one of whom was Finkel. The Council met on Friday afternoon and appointed a Committee on Publications: Slaughter, who continued as managing editor, R. D. Carmichael, University of Illinois, and W. H. Bussey, University of Minnesota, both of whom were already serving as *Monthly* editors. Negotiations were also immediately made with the owners of the *Monthly* to make it the official journal of the Association. This was quickly done, and the January 1916 issue came out (a bit later than usual) under the new organization. The Committee on Publications was empowered to make appointments to fill out the Editorial Board to fifteen, the same number of editors as the *Monthly* had at the beginning of 1915. Of the fifteen chosen, eight were already editors, including Finkel and Roever.

The official creation of the Missouri Section

Missouri was one of the first sections of the MAA to be organized. There are inconsistencies in the various statements in the *Monthly* as to which section was actually the first, with the contenders being (in alphabetical order) Kansas, Missouri, and Ohio. Part of the problem is what

is meant by “first.” It is known that the first *meeting* of an officially recognized section of the MAA was in Kansas, March 18, 1916, as reported in the March 1916 *Monthly*. However, the exact date of the *charter* of the Kansas Section is not known. The Ohio Section held their first meeting as a section on April 21-22, 1916, a month after the Kansas meeting, but, according to the Ohio Section History [1], they also have a copy of the official notification letter from President Hedrick granting their request to form a section, dated March 1, 1916. The letter from Ohio requesting section-hood was sent on January 3, 1916, according to [1]. Kansas claims that they, via U. G. Mitchell, their representative at the Columbus meeting, submitted their letter requesting admission as a section immediately after the meeting on December 31, 1915. Also, Kansas held their “preliminary meeting” prior to the Columbus meeting in “the autumn of 1915,” earlier than the 1915 meeting at Washington University in Missouri. But in his article in the May 1927 *Monthly*, “The Association and its Sections” Slaughter says, “It will be recalled that Ohio and Missouri were contestants for the honor of securing the first charter for a section and that Ohio won by the margin of a few minutes, both petitions being presented within an hour after the final adoption of the constitution at the organization meeting of the Association in Columbus, Ohio, in December, 1915.” So, we in Missouri appear not to have been the first section, either in terms of requesting/receiving a charter or in terms of holding the first section meeting. The question of priority between Ohio and Kansas is less clear, and, happily, not our concern. Besides, there is plenty of glory to go around – when the *Monthly* and, later, the MAA were formed, both Finkel and Hedrick, respectively, were Missourians; Slaughter, from Illinois, was probably the main mover in the formation of the MAA; the organization meeting was held in Ohio; and so on. The remark of Dizzy Dean, the Hall-of-Fame pitcher for the St. Louis Cardinals, and another Missourian, seems appropriate here. When asked if he had been the greatest pitcher in baseball, Diz replied, “Well, podnah, I don’t know if I was the greatest, but I was amongst ‘em.” When the MAA began, Missourians were not only “amongst ‘em” at every stage, but also often out front in a leadership role.

In the beginning, Missouri had fifty-one Charter Members of the MAA and three Institutional Members. The Charter Members were concentrated in St. Louis (20) and Columbia (10). The rest were scattered around the state, mainly where there were colleges, such as First District Normal School (Kirksville), St. Joseph Junior College, Drury College (Springfield), William Jewell College (Liberty), Christian University (now Culver-Stockton, Canton), Synodical College and Conservatory of Music (Fulton), Tarkio College, Cape Girardeau Normal School, State Normal School (Warrensburg), Park College (Parkville), and Hardin College (Mexico). The Institutional Members were Central College in Fayette, the University of Missouri, and Washington University in St. Louis. Later institutional members were Culver-Stockton in 1917, Stephens Junior College in 1920, Northwest Missouri State Teachers College in 1924, and the Missouri School of Mines and Metallurgy and The Principia, both in 1925. Unfortunately, by 1935 only Washington University and MSM remained institutional members, and these two were still the only ones listed in Missouri until 1945, when the list of institutional members was no longer a part of the “List of Officers and Members” that appeared biannually in the *Monthly*.

The first meeting of the Missouri Section of the MAA was at Central High School in St. Louis on November 18, 1916. Except for 1918, when there was no meeting because of World War I, the section met in November or December each year through 1930. Then, from 1931 through 1936, there is no record of any meetings, probably because of the Depression and lack of money

for travel. The Depression was most likely also the reason for the decline in institutional memberships. Meetings were again held from 1937 through 1942, with the meetings now occurring in April, except for 1942, when the meeting, originally scheduled in April, was moved to December. There was another hiatus from 1943 through 1947 due to World War II. Then, in 1948, Missouri Section meetings resumed, were held in the spring, and have continued without interruption.

The Missouri Section through 1930

Each Missouri Section meeting from 1916 through 1930 was held in one of three cities – St. Louis (5), Columbia (2), or Kansas City (7). Most of these meetings were either concurrent or consecutive with meetings of other organizations. In December, 1925, the national MAA annual meeting was in Kansas City, and this also served as the Missouri Section meeting for that year. Here is the list of dates, places, and other organizations involved for Missouri Section meetings through 1930.

Date	Place	Other organizations
11/18/16	Central H.S., St. Louis	None
11/17/17	Public Library, Kansas City	Missouri State Teachers Association
12/29-30/19	St. Louis (a dinner was held at the American Hotel Annex the evening of the 30 th)	Chicago and Southwestern Sections of the AMS and Section A of the American Association for the Advancement of Science
11/13/20	The Junior College of Kansas City	None
11/25-26/21	Soldan H.S. and Washington University, St. Louis	Southwestern Section of AMS
11/18/22	The Junior College of Kansas City	Missouri State Teachers Association
11/30-12/1/23	University of Missouri, Columbia	Southwestern Section of AMS
11/15/24	The Junior College of Kansas City	Missouri State Teachers Association
12/30-31/25	The Junior College of Kansas City	With 10 th annual meeting of MAA
11/13/26	The Junior College of Kansas City	None
11/25-26/27	Washington University, St. Louis	Southwestern Section of AMS
11/17/28	The Junior College of Kansas City	Missouri State Teachers Association

11/16/29	Washington University, St. Louis	None
11/28/30	University of Missouri, Columbia	AMS

In the report on the 1930 meeting (February 1931 *Monthly*) is the statement, “It was decided to hold the 1931 meeting at Washington University, St. Louis, at the time of the meeting of the Missouri State Teachers Association in November.” But no record of this meeting exists in the *Monthly*.

Washington University and the University of Missouri (Columbia) are, of course, still with us, but the Junior College of Kansas City, an active institution in the Missouri Section in the early years, does not exist under that name today. In 1915, Kansas City Polytechnic Institute was established and became, in 1919, The Junior College of Kansas City. The Junior College continued to expand until 1964, when the Kansas City School District combined with seven suburban districts to create the Metropolitan Community Colleges District. Today, the MCC has five campuses spread across four counties in the Kansas City area: Longview, Maple Woods, Penn Valley, Blue River, and the Business & Technology College. These institutions can properly be considered direct descendants of the Junior College of Kansas City and the Kansas City Polytechnic Institute.

The 1925 meeting in Kansas City was much more than even the national MAA meeting. The eighty-second meeting of the American Association for the Advancement of Science was in Kansas City the week of December 28, 1925 to January 2, 1926, and included fifteen sections of the AAAS holding sessions plus twenty-nine scientific societies and other organizations independent of the AAAS but related to it in their fields of work. Among these twenty-nine were the AMS, the MAA, and Pi Mu Epsilon. To give an idea of the breadth of the meeting, other organizations present included the American Physical Society, the American Meteorological Society, the American Association of Economic Entomologists, the Botanical Association of America, the Ecological Association of America, the American Association of Agronomy, the Potato Association of America, and Sigma Xi. Total attendance was over 2000 with nearly 1000 papers and addresses given. Now that was a broad-based scientific meeting!

The 1925 Kansas City meeting is also notable for being the meeting at which the MAA awarded the first Chauvenet Prize for Mathematical Exposition, to Professor G.A. Bliss of the University of Chicago. This prize has Missouri roots. William Chauvenet (1820-1870), for whom it is named, was Professor of Mathematics in the U.S. Navy, 1847-1859, President of the Academic Board of the Navy, 1847-1850, and then Professor of Mathematics and Natural Philosophy at Washington University, St. Louis, from 1859-1869. W.H. Roever, Washington University, published an article about Chauvenet in *Washington University Studies*, Vol. XII, *Scientific Series*, No. 2, in 1925, and presented this paper, or parts of it, in a joint session of Sections A (Mathematics) and F (Historical and Philological Sciences) of the AAAS titled “William Chauvenet and his mathematical contribution to astronomy.” So, the next time you see the announcement of the Chauvenet Prize, you can connect it with Missouri.

Most of the time, the talks at Missouri Section meetings were given by people from Missouri, but sometimes when the meeting was combined with the meeting of another organization, others also

presented papers. This happened first in 1919, when our section meeting was combined with AMS and AAAS meetings. That year, speakers included G.D. Birkhoff (Harvard), G.A. Bliss (Chicago), and H.E. Slaught (Chicago). In 1923, Henry Blumberg from the University of Illinois spoke at the Missouri Section meeting and in 1927 E.B. Stouffer of the University of Kansas spoke. Of course, the 1925 meeting included speakers from all over the country, as described above.

People in the early years

The real character of an organization comes from the people involved, and the Missouri Section has been blessed with a number of dedicated and well-known members. B.F. Finkel and E.R. Hedrick have already been mentioned, but their contributions and influence on the MAA itself, not just the Missouri Section, cannot be overemphasized. The *Monthly*, Finkel's great idea, which became reality in Kidder, MO in 1894, started it all, and Finkel remained on the editorial board of the *Monthly* until his death in 1947. Hedrick, as related above, was the first president of the MAA, and, according to Finkel (June-July 1931 *Monthly*), "The person to whom chief credit is due for obtaining this phenomenal charter membership [in MAA] was Professor E.R. Hedrick ... whose optimism and undaunted determination to see this worthy cause succeed abundantly never flagged or hesitated." Finkel noted that Slaught, Hedrick, and Cairns were sometimes referred to as "the Association's Triumvirate." Hedrick left the University of Missouri to become Head of the Mathematics Department at the University of California in 1924, and later, in 1937, was Vice President and Provost at UCLA. Hedrick received his doctorate from Göttingen in 1901 under none other than David Hilbert. When you go to the Hedrick Lecture at the annual Joint Mathematics Meetings, remember that Hedrick began his long and productive association with the MAA as a Missourian.

W.H. Roever and Otto Dunkel, both from Washington University, also are conspicuous for their MAA activities, both at the section level and at the national level. As has been mentioned, Roever was an editor of the *Monthly* when the MAA was created, and Dunkel also served as editor beginning in 1917 and continuing into the 1940s, being in charge of the problems section for many years. Roever and Dunkel were frequent speakers at section meetings, and Roever was chair of the section twice (1917-19 and 1930-31) and vice-chair once (1926-27). A third Washington University faculty member, Paul R. Rider, became secretary/treasurer of the Missouri Section in 1917, was made "permanent" in this position in 1919 (to avoid the bother of an election, presumably), and served until the cessation of meetings in the early '30s. In the '40s Rider again held offices in the section, being secretary/treasurer in 1947 and chairman in 1948-49. In 1951 Rider moved to Ohio to become Chief Statistician at the Aerospace Research Lab at Wright Patterson Air Force Base, and in 1953-54 was president of the Ohio Section. He received his Ph.D. at Yale in 1915, spent 1915-16 at Yale's Sheffield Scientific School, and began at Washington University in the fall of 1916. I would like to find a copy of Rider's talk at the 1926 Missouri Section meeting, in which he gave an overview of the first ten years of the history of the Missouri Section.

Kansas City represented the western part of Missouri well in the early years of the section, with seven of the first fifteen section meetings, including the 1925 national MAA Meeting, being held there. Names of people in the Kansas City area encountered often are William A. Luby, of

Kansas City Polytechnic Institute/Junior College of Kansas City, R.A. Wells, of Park College in Parkville, and R.R. Fleet of William Jewell College in Liberty. Luby was vice-chair of the section twice (1921-23) and chair twice (1927-29), Fleet was also both chair (1923-24) and vice-chair (1923-24), and Wells was vice-chair (1923-24). All three presented papers at section meetings as well.

In addition to Hedrick, others from the University of Missouri were active in the section. Louis Ingold was section chair twice (1920-21 and 1929-30), and G.E. Wahlin (1925-26) and Kathryn Wyant (1926-27) each served as chair. Wyant was the first woman to hold office in the section, though women participated in Missouri Section meetings from the beginning, including the “unorganized” 1915 meeting.

Another Ingold active in the Missouri Section was Byron Ingold of Christian University, which in 1917 became Culver-Stockton College, in Canton. I don't know how, if at all, the Ingolds were related. Byron Ingold was one of those who presented a paper at the first Missouri Section meeting in 1916.

It is an interesting exercise, and if you have access to JSTOR, an easy one nowadays, to look up the *Register of Officers and Members* which came out about every two years in the *Monthly* from the beginnings of the MAA into the 1940s. There you will find a listing of Geographical Distribution of Individual Members, where you can look up your city or town in Missouri and see who from there was an MAA member. If you check from 1916 all the way into the 1940s, one or two names from your town will often reoccur many times. This is one way to identify someone about whom you can then find out more and thus contribute to the history of our section. If you do this and write something up, don't forget to send me a copy! In the period from 1916 to the 1930s, there were MAA members all over Missouri, and many participated in section activities.

To be continued ...

References (a rough list)

1. Ohio Section History <http://www.bgsu.edu/departments/math/Ohio-Section/History>
2. January 1993 *Monthly* about Finkel and the first 100 years of the *Monthly*
3. Slaughter, H.E., The Promotion of Collegiate Mathematics, *Monthly*, XXII (8), 251-253
4. March 1915 *AMS Bulletin* – The Winter Meeting of the Society at Chicago
5. July 1915 *AMS Bulletin* – The April Meeting of the American Mathematical Society in New York
6. 1931 June-July *Monthly*
7. *Science*, Vol LXIII no 1622, describing AAAS meeting in KC
8. Many issues of the *Monthly* contain information about the Missouri Section